

CLAIMS

1. An arrangement for producing a camshaft (1) comprising a shaft (2) and a number of cams (3) pressed thereon, characterised in that the arrangement comprises at least two machining stations (11), of which at least one is embodied as a knurling station (4) and at least one is embodied as a press-on station (5).
2. An arrangement for producing a camshaft (1) according to claim 1, characterised in that the knurling station (4) and the press-on station (5) each have a corresponding workpiece-receiving socket (6) for receiving, especially for receiving with angular precision, the shaft (2) using a positioning element (7) affixed thereon.
3. An arrangement for producing a camshaft (1) according to claims 1 or 2, characterised in that the arrangement comprises a plurality of knurling stations (4) and respectively following press-on stations (5) and a manipulating device for conveying the shaft respectively from one machining station to the next.
4. An arrangement for producing a camshaft (1) according to claims 2 or 3, characterised in that the positioning element (7) is configured as a mandrel (9) or a chuck (10).
5. An arrangement for producing a camshaft (1) according to any one of claims 1 to 4, characterised in that the positioning element (7) is configured as complementary to the shaft termination (42) which is connected to the positioning element (7).
6. An arrangement for producing a camshaft according to claims 1 to 4, characterised in that the workpiece-receiving socket (6) is configured in the same way for all machining stations (11).
7. A method for producing a camshaft (1) from a shaft (2) and a number of cams (3) which are pressed onto the shaft (2) in a series of machining steps, characterised in that a positioning element (7) is affixed to the shaft (2) before the first machining step, the shaft (2) is fixed by means of the positioning element (7) to at least one machining station (11) in a first defined position for the duration of a

- first machining step, and that the shaft is affixed by means of the positioning element (7) to at least one further machining station (11) in a second defined position for the duration of a second machining step.
8. The method for producing a camshaft (1) according to claim 7, characterised in that the shaft (2) is knurled in the first machining step.
 9. The method for producing a camshaft according to claim 7, characterised in that a cam (3) is pressed onto the shaft in the second machining step.
 10. The method for producing a camshaft according to any one of claims 7 to 9, characterised in that the shaft (2) is knurled on a knurling station (4) in the area of the positions provided for the cams, then in a second step a cam (3) is pressed on a press-on station (5) in the provided position and the two steps are then repeated for further cams (3).
 11. The method for producing a camshaft according to claim 11, characterised in that the defined position for fixing the shaft (2) with the aid of the positioning element (7) on a press-on station (5) or on a knurling station (4) is the same for at least all the knurling stations (5) and that the cams (3) are brought into the correct angular position for pressing-on.
 12. The method for producing a camshaft according to claim 11, characterised in that the defined position for fixing the shaft (2) onto the pressing station (5) using the positioning element (7) in each case pre-defines the angular position for pressing-on the shaft (3).
 13. The method for producing a camshaft according to any one of claims 7 to 10, characterised in that the knurling or pressing-on is carried out in respectively the same knurling station (4) or press-on station (5).
 14. The method for producing a camshaft according to any one of claims 7 to 11, characterised in that the knurling or pressing-on is carried out in a plurality of respectively the same knurling stations (4) and/or press-on stations (5).

15. The method for producing a camshaft according to any one of claims 7 to 12, characterised in that the shaft is fixed sequentially using the positioning element (7) first in a workpiece-receiving socket (6) of the knurling station (4) and then in a workpiece-receiving socket (6) of the press-on station (5).
16. The method for producing a camshaft according to any one of claims 7 to 12, characterised in that the shaft is fixed sequentially using the positioning element (7) first in a workpiece-receiving socket (6) of the knurling station (4) and then in a workpiece-receiving socket (6) of the knurling station (5).
17. The method for producing a camshaft according to any one of claims 7 to 13, characterised in that the positioning element (7) is removed from the shaft (2) after the last pressing-on of a cam (3) in a press-on station (5).
18. Use of a positioning element (7) comprising a fixing arrangement for positive and/or non-positive fixing of a shaft (2) during the machining steps of knurling the shaft (2) and pressing cams (3) onto the shaft (2) provided for the manufacture of a camshaft (1), as a connecting part for the positionally-accurate, especially angularly accurate connection to the corresponding workpiece-receiving socket (6) of at least one knurling station (4) and at least one press-on station (5).